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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
NGUYEN, KEVIN M	
ART UNIT	PAPER NUMBER
2629	

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/797,226	LIH ET AL.	
	Examiner	Art Unit	
	Kevin M. Nguyen	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. How is the peak of the first waveform equal to the second waveform ?

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Sung et al (US 6,950,082) hereinafter Sung '082.

5. As to claim 1, figure 2 of Sung '082 teaches an active-matrix organic light emitting diode display, comprising:

an organic light emitting diode [235];

a first driving transistor [M21], connecting an anode of the organic light emitting diode [235] and a first driving voltage having a first waveform [V_{DD}];

a second driving transistor [M3], connecting an anode of the organic light emitting diode [235] and a second driving voltage having a second waveform [V_{ref}];

a switch transistor [M1], connecting and switching the first and second driving transistors [M1, M3], wherein the first waveform [V_{DD}] and the second waveform [V_{ref}] are complementary to alternatively drive the organic light emitting diode in col. 2, line 50 through col. 3, line 67.

6. As to claim 2, Sung '082 teaches the active-matrix organic light emitting diode display as claimed in claim 1, wherein the first driving transistor, the second driving transistor and the switch transistor are Thin Film Transistors (TFTs) in col. 4, lines 18-23.

7. As to claim 3, Sung '082 teaches the active-matrix organic light emitting diode display as claimed in claim 1 further comprising a capacitor providing a driving voltage to enable the first and second driving transistors in col. 3, lines 35-47.

8. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Sung (US 6,680,580) hereinafter Sung '580.

9. As to claim 1, figure 4 of Sung '580 teaches an active-matrix organic light emitting diode display, comprising:

an organic light emitting diode [104];

a first driving transistor [102], connecting an anode of the organic light emitting diode [104] and a first driving voltage having a first waveform [V_{DD}];

a second driving transistor [108], connecting an anode of the organic light emitting diode [104] and a second driving voltage having a second waveform [V_{com}];

a switch transistor [100], connecting and switching the first and second driving transistors [102, 108], wherein the first waveform [V_{DD}] and the second waveform [V_{com}] are complementary to alternatively drive the organic light emitting diode in col. 5, line 10 through col. 6, line 54.

10. As to claim 2, Sung '580 teaches the active-matrix organic light emitting diode display as claimed in claim 1, wherein the first driving transistor, the second driving transistor and the switch transistor are Thin Film Transistors (TFTs) in claim 9.

11. As to claim 3, Sung '580 teaches the active-matrix organic light emitting diode display as claimed in claim 1 further comprising a capacitor [106] providing a driving voltage to enable the first and second driving transistors in col. 5, lines 35-40.

12. As to claim 4, Sung '580 teaches the active-matrix organic light emitting diode display as claimed in claim 1, wherein the first waveform and the second waveform are alternatively complementary square waves in figure 5.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yumoto et al (US 6,542,142, hereinafter Yumoto) in view of Chen et al (US 6,891,520, hereinafter Chen).

15. As to claim 1, Yumoto teaches figure 3 of Yumoto teaches an active-matrix display device, comprising:

a display electrode [PAD_1];

a first driving transistor [P_1] having a first driving voltage [V_{PP}] having a first waveform [V_{chg} in figure 6];

a second driving transistor [N_2] having a second driving voltage [Vcc] having a second waveform [V_{chg} in figure 6];

a switch transistor [N_1], connecting and switching the first and second driving transistors [P_1, N_2], wherein the first waveform [V_{pp}] and the second waveform [V_{cc}] are complementary to alternatively drive the display electrode in figure 6, col. 7, line 54 through col. 8, col. 9, line 37.

Yumoto teaches all of the claimed limitation of claim 1, except for the organic light emitting diode display device.

However, Chen conventionally discloses a related active matrix organic light emitting diode display device which comprises an organic light emitting diode 46 including an anode electrode in figure 4A.

16. As to claim 2, Yumoto teaches the active-matrix organic light emitting diode display as claimed in claim 1, wherein the first driving transistor, the second driving transistor and the switch transistor are Thin Film Transistors (TFTs) in col. 18, line 4.

17. As to claim 3, Yumoto teaches the active-matrix organic light emitting diode display as claimed in claim 1 further comprising a capacitor [C1] providing a driving voltage to enable the first and second driving transistors in col. 8, lines 45 through col. 9, line 37.

18. As to claim 4, Yumoto teaches the active-matrix organic light emitting diode display as claimed in claim 1, wherein the first waveform and the second waveform are alternatively complementary square waves in figure 6, col. 12, line 56 through col. 13, line 8.

19. As to claim 5, Yumoto teaches the active matrix organic light emitting diode display as claimed in claim 1, wherein the peak of the first waveform is equal to the second waveform in col. 12, lines 61-63.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Yumoto's display device to make the organic light emitting diode display device as conventionally disclosed by Chen, because this would improve a wider viewing angle, while fabricating a driving circuitry at low cost and low power consumption (see Chen, col. 1, lines 12-19).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN M. NGUYEN whose telephone number is 571-272-7697. The examiner can normally be reached on MON-THU from 8:00-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, a supervisor RICHARD A. HJERPE can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the Patent Application Information Retrieval system, see http://portal.uspto.gov/external/portal/pair. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Nguyen

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Patent Examiner
Art Unit 2629

KMN
December 4, 2006